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Service (sector) Retina and Vitreous N° CEP

**The influence of retinal thickness on visual acuity after laser photocoagulation and the metabolic profile of patients with diabetic macular edema.**

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**Purpose:** To determine the influence of retinal thickness on the visual outcome after laser photocoagulation in patients with diabetic macular edema and to verify the metabolic profile of these patients.

**Methods:** Thirty patients with clinical diagnoses of diabetic macular edema were selected during Diabetic Eye Campaign, 2001. Physical and ophthalmologic examination were performed. Systemic blood samples, fundus photographs and OCT images of the macula area were taken before treatment with laser photocoagulation. Ten of these patients returned to the follow up examination after 3 months of the treatment and visual acuity was measured.

**Results:** Ages ranged from 48 to 83 years. In a total of 30(67%) patients, we observed that a high level of serum cholesterol was present, a high level of serum triglyceride in 70%, high level of creatinine in 3 % and a high level of glycosylated hemoglobin in 83% of the patients. Systemic hypertension was diagnosed in 87% of these patients, although 66% were taking some antihypertensive medication. In a total of 10 patients that returned to the follow up examination, we could verify that the visual acuity of 15 eyes treated with photocoagulation were improved in 20%, remained the same in 33% and decreased in 47%. In these patients, retinal thickness before treatment with laser photocoagulation did not correlate with visual acuity after treatment ( $p=0,989$ ).

**Conclusion:** No correlation between retinal thickness and visual acuity after laser photocoagulation was found in patients with diabetic macular edema. These patients also had poor glycemic and blood pressure control.